

Safety Data Sheets

1. IDENTIFICATION

Product Identifier	UV ink LUS-211 Cyan
Product code	LUS211-C-BA
Recommended use and restriction use	INK JET ink
Supplier name	MIMAKI ENGINEERING CO., LTD.
Address	2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 JAPAN
Telephone number	+81-268-64-2413
Importer / Distributor Information	MIMAKI SINGAPORE PTE. LTD.
Address	31 Kaki Bukit Road 3 Singapore 417818 TechLink #02-03
Telephone number	+65-6508-2789
Emergency telephone number	+65 3165 2217 (within Singapore only) +65 3158 1074

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION	
Physical and chemical hazards	Flammable liquids Not classified
Health hazards	Skin corrosion/irritation Category 2 Serious eye damage/eye irritation Category 2A Sensitization – skin Category 1 Reproductive toxicity Category 2
Environmental Hazards	Hazard to the aquatic environment (acute hazard) Category 1 Hazard to the aquatic environment (long-term hazard) Category 2

GHS LABEL ELEMENTS

Pictograms



Signal Word

Warning

Hazard Statements

H315 Causes skin irritation
 H319 Causes serious eye irritation
 H317 May cause an allergic skin reaction
 H361 Suspected of damaging fertility or the unborn child
 H400 Very toxic to aquatic life
 H411 Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

Obtain special instructions before use.(P201)
 Do not handle until all safety precautions have been read and understood.(P202)
 Avoid breathing mist, vapours and spray.(P261)
 Wash thoroughly after handling.(P264)
 Contaminated work clothing should not be allowed out of the workplace.(P272)

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Response	Avoid release to the environment(P273) Wear protective gloves, eye protection and face protection.(P280) IF ON SKIN: Wash with plenty of soap and water(P302+P352) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing(P305+P351+P338) IF exposed or concerned: Get medical advice/attention(P308+P313) Specific treatment.(P321) If skin irritation or rash occurs: Get medical advice/attention(P333+P313) If eye irritation persists: Get medical advice/attention(P337+P313) Take off contaminated clothing and wash it before reuse.(P362+P364) Collect spillage(P391)
Storage	Store locked up(P405)
Disposal	Dispose of contents/ container to an approved landfill.(P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances or mixtures	Mixtures		
Chemical name	Contents	Chemical Formula	CAS RN
Acrylate Resin	5-15%	Unknown	Confidential
Hexane-1,6-diyl diacrylate	70-80%	Unknown	13048-33-4
2-Propen-1-one, 1-(4-morpholinyl)-	0.1-1%	Unknown	5117-12-4
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	5-10%	Unknown	75980-60-8
C.I. Pigment blue-15:3	5-10%	Unknown	147-14-8

4. FIRST-AID MEASURES

In case of inhalation	IF exposed or concerned: Get medical advice and attention. Call a doctor if you feel unwell.
In case of skin contact	IF exposed or concerned: Get medical advice and attention. IF ON SKIN: Wash with plenty of soap and water. Take of contaminated clothing and wash before re-use. If skin irritation or rash occurs, get medical advice and attention. Specific treatment.
In case of eye contact	IF exposed or concerned: Get medical advice and attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
In case of ingestion	IF exposed or concerned: Get medical advice and attention. Rinse mouth. IF SWALLOWED: Call a doctor if you feel unwell.

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5. FIRE-FIGHTING MEASURES

Suitable fire-extinguishing media	Dry chemicals, CO2, fog, alcohol-resistant foam or sand.
Not suitable extinguishing media	Cylindric water.
Specific hazards arising from the chemical	Risk of producing harmful gases such as carbon monoxide. Avoid inhalation of smoke or gases.
Special protective actions for fire fighters	Use goggles in combination with dust mask, and another protections as appropriate to situation.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use goggles in combination with dust mask, and another protections as appropriate to situation.
Environmental precautions	Large spills :Evacuate area. Ensure adequate ventilation. Collect spillage. Do not discharge into the drains, surface waters or ground water directly.
Methods and materials for containment and cleaning up	small spill : absorb with material such as non-combustible material wash thoroughly after handling Large spills: Dike spills and dispose of in safe area.
Prevention Measures for Secondary Accidents	Keep away from sources of ignition and prepare extinguishing media. Risk of slipping. Spilled material forms slippery floor. Do not recklessly walk on the spillage.

7. HANDLING AND STORAGE

Handling	
Technical measures	Use local exhaust ventilation in case of production of fume or mist. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Safe handling advice	Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing dust/fume/gas/mist/vapours/spray.
Storage	
Suitable storage conditions	Store locked up.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Use local exhaust ventilation in case of production of fume or mist. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
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Individual protection measures Respiratory protection Hand protection Eye protection Skin and body protection	Use explosion-proof electrical equipment and prevent from static electrocity. If necessary, wear respiratory protection. Wear protective gloves. Wear eye protection/face protection. Wear protective clothing.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical State	Liquid
Color	blue
Odor	ester
Odor threshold	No data available
pH	No data available
Melting point	No data available
Boiling point	No data available
Flash point	>100°C(closed cup)
Evaporation rate	No data available
Flammability(Solid, Gas)	No data available
Flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Reactivity	No information available
Chemical stability	Stable under normal conditions of use.
Possibility of hazardous reactions	Polymerization and curing may occur when exposed to light, particularly ultraviolet rays.
Conditions to avoid	Heat source, storage near fire source, direct sunlight, ultraviolet rays
Incompatible materials	Oxidizing agent, oxides of Iron, strong base
Hazardous decomposition products	Carbon dioxide, carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute toxicity (Oral)	Category 4:5117-12-4 (converted value = 500mg/kg, source: 1272/2008/EC)
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	Not classified:147-14-8 (source: NITE) Classification not possible:75980-60-8 (source: 1272/2008/EC), 13048-33-4 (source: Registered substances (ECHA)) No data:Confidential (source: None)
Acute toxicity (Dermal) Acute toxicity (Inhalation : Gases) Acute toxicity (Inhalation : Vapours) Acute toxicity (Inhalation : dust/mist) Skin corrosion/ Irritation	Calculation result = 8500mg/kg. Classification result = Classification not possible. Unable to classify due to insufficient data. Does not fall under gas based on GHS definitions. Unable to classify due to insufficient data. Unable to classify due to insufficient data. Category 2:13048-33-4 (source: Registered substances (ECHA)) Not classified:147-14-8 (source: NITE) Classification not possible:75980-60-8 (source: 1272/2008/EC), 5117-12-4 (source: 1272/2008/EC) No data:Confidential (source: None)
Serious eye damage/ irritation	Sum of Category 2 Concentration limit = 10%. Classification result = Category 2. Category 1:5117-12-4 (source: 1272/2008/EC) Category 2:13048-33-4 (source: Registered substances (ECHA)) Classification not possible:147-14-8 (source: NITE), 75980-60-8 (source: 1272/2008/EC) No data:Confidential (source: None)
Respiratory Sensitization Skin Sensitization	Sum of Eye category 2 Concentration limit = 10%. Classification result = Category 2A. Unable to classify due to insufficient data. Category 1:5117-12-4 (source: 1272/2008/EC), 13048-33-4 (source: Registered substances (ECHA)) Classification not possible:147-14-8 (source: NITE), 75980-60-8 (source: 1272/2008/EC) No data:Confidential (source: None)
Germ cell mutagenicity Carcinogenicity Reproductive toxicity	13048-33-4 \geq 1% Classification result = Category 1 Ingredients not contributing to classification: 5117-12-4 (category = Category 1, source: 1272/2008/EC) Unable to classify due to insufficient data. Unable to classify due to insufficient data. Category 2:75980-60-8 (source: 1272/2008/EC) Classification not possible:147-14-8 (source: NITE), 5117-12-4

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	(source: 1272/2008/EC), 13048-33-4 (source: Registered substances (ECHA))
	No data:Confidential (source: None)
Reproductive toxicity, effects on or via lactation	75980-60-8 >= 3% Classification result = Category 2 Unable to classify due to insufficient data.
Specific target organ Toxicity – Single Exposure	Unable to classify due to insufficient data.
Specific target organ toxicity – Repeated Exposure	Category 2:5117-12-4 (organ = ---, source: 1272/2008/EC) Classification not possible:147-14-8 (source: NITE), 75980-60-8 (source: 1272/2008/EC), 13048-33-4 (source: Registered substances (ECHA)) No data:Confidential (source: None)
Aspiration hazard	Substances classified as hazardous are below the concentration limit. Contains substance of unknown toxicity. Changed from Not classified to Classification not possible. Unable to classify due to insufficient data.

12. ECOLOGICAL INFORMATION

Hazardous to the Aquatic Environment – Acute Toxicity	Category 1:13048-33-4 (source: Registered substances (ECHA)) Classification not possible:147-14-8 (source: NITE), 75980-60-8 (source: 1272/2008/EC), 5117-12-4 (source: 1272/2008/EC) No data:Confidential (source: None)
Hazardous to the Aquatic Environment – Chronic Toxicity	Category 1 x M factor >= concentration limit(25%). Classification result = Category 1. Category 2:13048-33-4 (source: Registered substances (ECHA)) Classification not possible:147-14-8 (source: NITE), 75980-60-8 (source: 1272/2008/EC), 5117-12-4 (source: 1272/2008/EC) No data:Confidential (source: None)
Hazardous to the Ozone layer	(M factor x 10 x Category 1) + Category 2 >= Concentration limit(25%). Classification result = Category 2. Unable to classify due to insufficient data.

13. DISPOSAL CONSIDERATIONS

Residual Waste	Before disposal, make the wastes harmless, stabilized, and neutralized, and minimize danger and toxicity of the wastes. Dispose of waste in accordance with local,state and federal regulations.
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Contaminated Container and Packaging Passed to a licensed waste contractor.
 In case of disposal of empty containers, remove the content thoroughly.

14. TRANSPORT INFORMATION

International regulations

Sea(IMDG)

UN number 3082
 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Transport hazard class(es) 9
 Packing group III
 Special Provision 2.10.2.7 *1

air(IATA)

UN number 3082
 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 Transport hazard class(es) 9
 Packing group III
 Special Provision A197 *1

*1 Single or inner packaging less than 5 L (liquid) or 5 kg net (solids) is excepted from Dangerous Goods regulations -- see UN Special Provision.

15. REGULATORY INFORMATION

No main regulation

Component Analysis – Inventory

Hexane-1,6-diyl diacrylate (13048-33-4)

TSCA – United States	ENCS – Japan	KECI Annex 1, 2 – Korea	IECSC – China	DSL/NDSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	TCSI – Taiwan	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

2-Propen-1-one, 1-(4-morpholinyl)- (5117-12-4)

TSCA – United States	ENCS – Japan	KECI Annex 1, 2 – Korea	IECSC – China	DSL/NDSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	TCSI – Taiwan	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (75980-60-8)

TSCA – United States	ENCS – Japan	KECI Annex 1, 2 – Korea	IECSC – China	DSL/NDSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	TCSI – Taiwan	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

C.I. Pigment blue-15:3 (147-14-8)

TSCA – United States	ENCS – Japan	KECI Annex 1, 2 – Korea	IECSC – China	DSL/NDSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	TCSI – Taiwan	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



Product Name: UV ink LUS-211 Cyan
SDS No. 037-U317713
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Revised:

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16. OTHER INFORMATION

Literature References

NITE GHS

EU CLP Regulation, AnnexVI

Other data

The information suggested in this Safety Data Sheet does not comprehend everything and should be adopted only as a guide. The accuracy of the information and recommendations suggested herein are credible. However the company makes no warranty regarding such information and recommendations and disclaims all liability for reliance thereon.